

Application No.: 10/049,838

Docket No.: 21029-00240-US

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS

1-8 (Canceled)

9. (New) A flat glass ribbon annealing lehr, including pre-annealing, annealing and post-annealing zones defined along an internal chamber of the lehr, and comprising:
- groups of cooling-air heat exchangers, producing heat exchange by radiation, selectively situated above and/or beneath the glass ribbon, within the internal lehr chamber and located in each of corresponding zones;
 - a first single cooling-air intake manifold connected to groups of exchangers in the pre-annealing and annealing zones, which manifold is situated where the pre-annealing and annealing zones meet; and
 - a second single cooling-air intake manifold connected to groups of exchangers in the annealing and post-annealing zones, which manifold is situated where the annealing and post-annealing zones meet.
10. (New) A lehr according to Claim 9, wherein the second single manifold exists in the form of ducts, divided vertically into two sections to which the annealing and post-annealing exchangers are connected.
11. (New) A lehr according to Claim 9, wherein a single fan is installed in the annealing zone and which draws in air that flows through the groups of exchangers of the pre-annealing and annealing zones.

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12. (New) A lehr according to Claim 9, together with means for controlling the temperature of cooling air on intake to the annealing zone and on discharge from the post-annealing zone.

13. (New) A lehr according to Claim 12, wherein the temperature-control system comprises:

at least one first temperature sensor situated at the end of the pre-annealing zone;

a first temperature regulator to which the first temperature sensor is connected and which has, at its reference point, the desired temperature for the end of pre-annealing zone;

a first plurality of motorized valves actuated by the first regulator and which regulate the air flow rate passing through each group of exchangers of the pre-annealing zone;

at least one second temperature sensor situated at the end of the annealing zone;

a second temperature regulator to which the second temperature sensor is connected and which has, as its reference point, the desired temperature for the end of the annealing zone;

a second plurality of motorized valves actuated by the said second regulator and which regulate the flow rate of air recirculated through each group of exchangers of the annealing zone;

means for controlling the temperature of the recirculating air passing through the exchangers of the annealing zone and which includes at least one third temperature sensor installed in first inlet ducts of the annealing zone exchangers, a third temperature regulator receiving its temperature reference point from a fourth temperature sensor installed in second inlet ducts of the annealing zone exchangers and regulating the air temperature on inlet into the annealing zone exchangers via regulating valves;

at least one fifth temperature sensor located at the end of the post-annealing zone;

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a fourth temperature regulator to which the fifth sensor is connected and which has as its reference point the desired temperature for the end of the post-annealing zone; and
a third plurality of motorized valves regulating the air flow rate recirculated through the post-annealing exchangers.

14. (New) A *lehr* according to Claim 13, wherein the temperature control means, on the basis of temperature measurements taken by all of the temperature sensors of each of the three zones, adapts the temperatures and the flow rates of air in all of the exchangers of the three zones so as to obtain a glass ribbon temperature curve simulating a preselected theoretical annealing curve.

15. (New) A *lehr* according to one of Claims 13, wherein all the regulators are built into a centralized regulating system employing algorithms of the fuzzy logic type.

16. (New) A *lehr* according to Claims 13, wherein all the regulators are built into a centralized regulating system employing neuro-predictive algorithms.